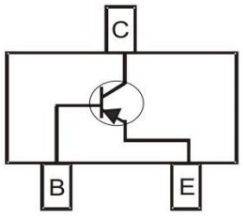
2SA812M6

SOT-23 Bipolar Transistor 双极型三极管

■Features 特点

PNP General Purpose 通用





■Absolute Maximum Ratings 最大额定值

Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Collector-Base Voltage 集电极基极电压	V_{CBO}	-60	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	-50	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	-5	V
Collector Current 集电极电流	I_C	-100	mA
Power dissipation 耗散功率	$P_C(T_a=25℃)$	200	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\Theta JA}$	625	℃/W
Junction and Storage Temperature 结温和储藏温度	T_J,T_{stg}	-55to+150℃	

■Device Marking 产品打标

H_{FE}	90-180	135-270	200-400	300-600
Mark	M4	M5	M6	M7

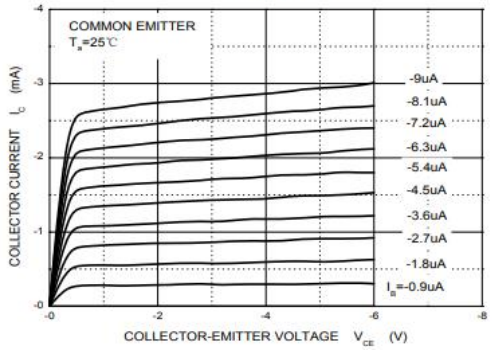
■Electrical Characteristics 电特性

(T_A=25℃ unless otherwise noted 如无特殊说明，温度为 25℃)

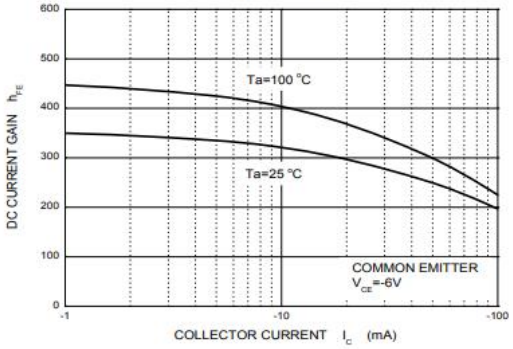
Characteristic 特性参数	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Collector-Base Breakdown Voltage 集电极基极击穿电压 (I_C=-100uA，I_E=0)	BV_{CBO}	-60	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压 (I_C=-1mA，I_B=0)	BV_{CEO}	-50	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压 (I_E=-100uA，I_C=0)	BV_{EBO}	-5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流 (V_{CB}=-60V，I_E=0)	I_{CBO}	—	—	-100	nA
Emitter-Base Leakage Current 发射极基极漏电流 (V_{EB}=-5V，I_C=0)	I_{EBO}	—	—	-100	nA
DC Current Gain 直流电流增益 (V_{CE}=-6V，I_C=-1mA)	H_{FE}	90	—	600	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降 (I_C=-100mA，I_B=-10mA)	$V_{CE(sat)}$	—	—	-0.3	V
Base-Emitter Saturation Voltage 基极发射极饱和压降 (I_C=-100mA，I_B=-10mA)	$V_{BE(sat)}$	—	—	-1	V
Transition Frequency 特征频率 (V_{CE}=-6V，I_C=-10mA)	f_T	—	180	—	MHz
Output Capacitance 输出电容 (V_{CB}=-6V，I_E=0, f=1MHz)	C_{ob}	—	4.5	—	pF

■Typical Characteristic Curve 典型特性曲线

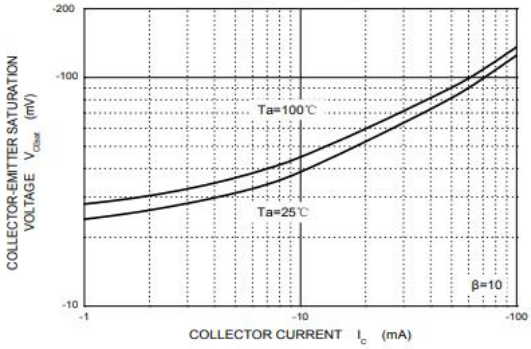
Static Characteristic



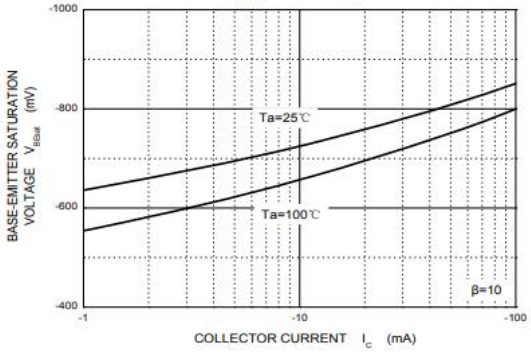
h_{FE} — I_C



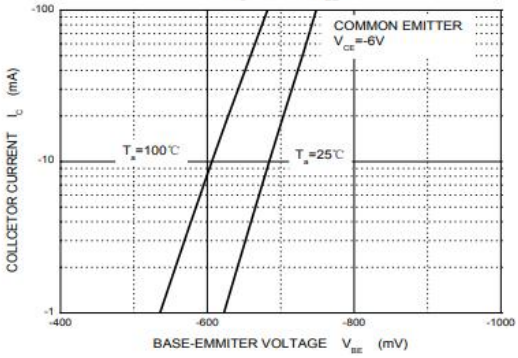
V_{CEsat} — I_C



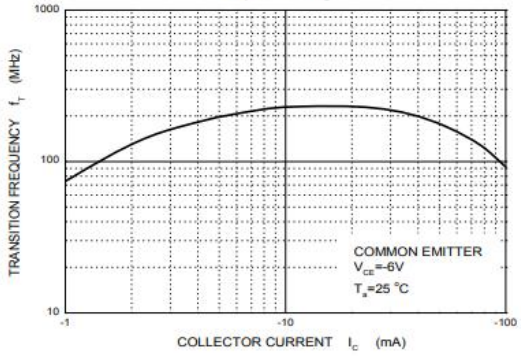
V_{BEsat} — I_C



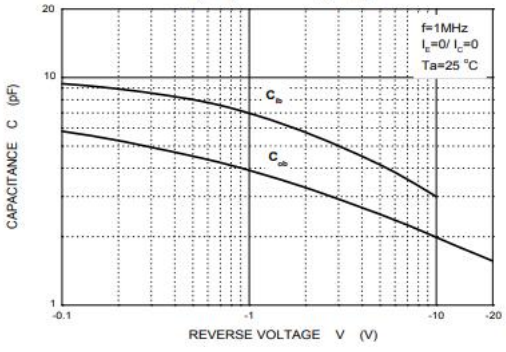
I_C — V_{BE}



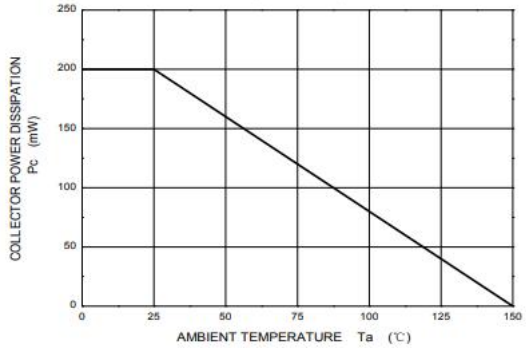
f_T — I_C



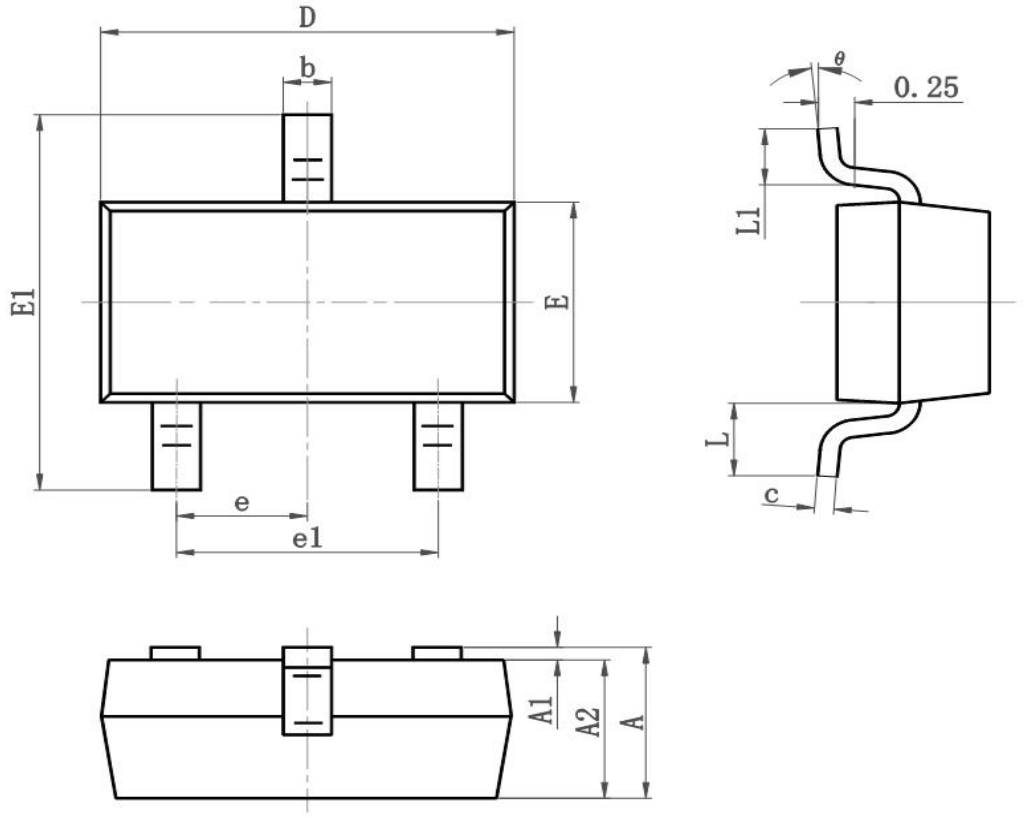
C_{ob} / C_{ib} — V_{CB} / V_{EB}



Pc — Ta



■Dimension 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.050	0.055
E1	2.250	2.550	0.089	0.100
e	0.900	1.00	0.035	0.039
e1	1.800	2.000	0.071	0.079
L	0.500	0.600	0.020	0.024
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°